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## The RF Line

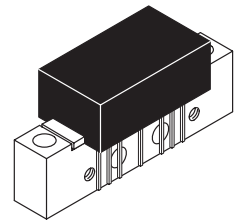
# High Output Doubler 550 MHz CATV Amplifier Module

The MHW6185B is designed specifically for 550 MHz CATV applications. Features ion-implanted arsenic emitter transistors and an all gold metallization system.

- 5th Generation Die Technology
- Specified for 77-Channel Performance
- Broadband Power Gain — @ f = 40–550 MHz  
 $G_p = 18.5 \text{ dB Typ @ 50 MHz}$   
 $19.5 \text{ dB Typ @ 550 MHz}$
- Broadband Noise Figure  
 $NF = 4.5 \text{ dB Typ @ 50 MHz}$
- Improvement in Distortion Over Conventional Hybrids
- Allows Higher Output Level Operation

# MHW6185B

**18 dB GAIN**  
**550 MHz**  
**77-CHANNEL**  
**CATV AMPLIFIER**



CASE 714Y-03, STYLE 1

ARCHIVE INFORMATION

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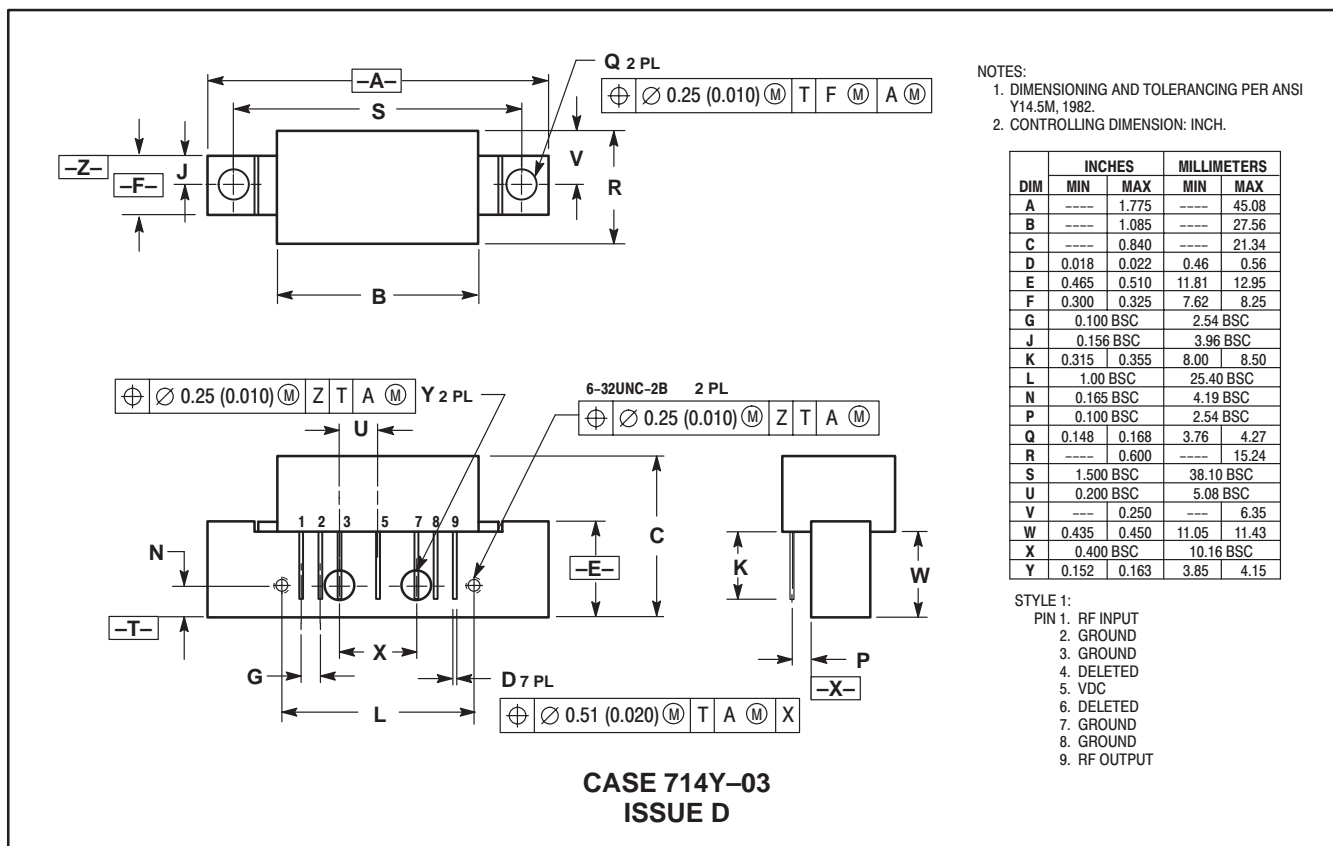
### ABSOLUTE MAXIMUM RATINGS

Rating	Symbol	Value	Unit
RF Voltage Input (Single Tone)	$V_{in}$	+70	dBmV
DC Supply Voltage	$V_{CC}$	+28	Vdc
Operating Case Temperature Range	$T_C$	-20 to +100	°C
Storage Temperature Range	$T_{stg}$	-40 to +100	°C

### ELECTRICAL CHARACTERISTICS ( $V_{CC} = 24 \text{ Vdc}$ , $T_C = +30^\circ\text{C}$ , 75 $\Omega$ system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	550	MHz
Power Gain	$G_p$	18	18.5	19	dB
		18.8	19.5	20.5	
Slope	S	0.3	—	2.0	dB
Gain Flatness (Peak To Valley)	—	—	—	0.5	dB
Return Loss — Input/Output ( $Z_0 = 75 \text{ Ohms}$ )	IRL/ORL	18	—	—	dB
Composite Second Order 77 ch, ( $V_{out} = +44 \text{ dBmV}$ )	$CSO_{77}$	—	-68	-65	dB
Cross Modulation Distortion (77 ch, $V_{out} = +44 \text{ dBmV @ } F_m = 55 \text{ MHz}$ )	$XMD_{77}$	—	-78	-68	dB
Signal-to-Triple Beat Noise (77 ch, $V_{out} = +44 \text{ dBmV}$ )	$CTB_{77}$	—	-66	-65	dB
Noise Figure	NF	—	6.0	7.5	dB
DC Current ( $V_{DC} = 24 \text{ Vdc}$ , $T_C = 30^\circ\text{C}$ )	$I_{DC}$	380	415	440	mA

### PACKAGE DIMENSIONS



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